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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,060	02/15/2002	Hugo Johan Cornelissen	NL010089	1636
24737	7590	01/15/2004	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			CARIASO, ALAN B	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			2875	

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/077,060	Applicant(s) CORNELISSEN ET AL.	
	Examiner Alan Cariaso	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14 and 18 is/are rejected.
- 7) ☒ Claim(s) 13, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant has filed a Petition under 37 CFR 1.181 on September 24, 2003 to withdraw the finality of the final Office action filed August 7, 2003. The Petition has been treated as an applicant's request for reconsideration of the finality of the rejection of the last Office action, which is persuasive and, therefore, the finality of that action is withdrawn. The Petition is granted, and applicant's amendment filed 16 October 2003 has been entered. No separate or further acknowledgement of its grant is being provided.

Drawings

2. The proposed drawings were received on October 16, 2003. These drawings are accepted in overcoming the drawing objections.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1, 2, 5, 6, 8, 10, 12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by REITHMEIER (US 6,488,385).

5. REITHMEIER discloses an illumination system comprising a light-emitting panel (10) and a light source (2) for coupling light or arranged to couple light from the light source into the light-emitting panel (10), the light source (2,5,15) including at least one electric low-pressure mercury-vapor discharge lamp (fluorescent lamps 2) having in normal operation an inherently fixed electromagnetic spectrum (white visible spectrum of light), characterized in that the light source (2,5,15) further comprising at least one light-emitting diode or a plurality of light-emitting diodes (5,15); the light emitting diodes (5,15) comprises a light emission wavelength (visible); further comprising control electronics for changing the luminous flux of the light emitting diodes (col.3, lines 12-15) or for at least selectively setting the luminous flux under control by a user (col.2, lines 33-37); wherein the at least one electric discharge lamp includes first and second electric discharge lamps (2) physically separated from one another (at least by frame parts 7-fig.2).

6. As for the phrases in claims 1, 2, 8 & 12, "for selectively setting the color temperature of the light emitted by the light source" (claim 1), "for selectively increasing the color temperature of the light emitted by the light source" (claim 2), "so as to set the color temperature of the light emitted by the light source independently of a display device illuminated by the light source" (claim 8), "for selectively setting the luminous flux of the at least one light emitting diode dependent upon the color temperature of ambient light or under control by a user" (claim 12), and "for selectively adjusting, during normal

operation of the illumination system, luminous flux of the at least one light emitting diode dependent upon the illumination level of an image displayed by the display device” (claim 14), any recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

7. Claims 1, 2, 5, 6, 8, 9, 12, 14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by German Patent (DC 20007134).

8. German Patent '134 discloses an illumination system comprising a light-emitting panel (8-fig.1 or 18-fig.3) and a light source (6,10,20) for coupling light or arranged to couple light from the light source into the light-emitting panel (8,18), the light source (6,10) including only one electric low-pressure mercury-vapor discharge lamp (6, figs.1-3) having, in normal operation, a fixed electromagnetic spectrum (page 2, lines 15-20 & line 34 or 5th and 7th paragraphs of English translation) characterized in that the light source (6,10,20) further comprising at least one light-emitting diode (10,20) or a plurality of light-emitting diodes (10,figs.1-3) for selectively setting the color temperature (see abstract or English translation of document on page 3, lines 3-7 or 1st paragraph) of the light emitted by the light source; that the light-emitting diodes (10,20) produce a light

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emission wavelength (at least green, blue, page 4, line 7) that inherently selectively increases the color temperature of the light emitted by the light source (page 3, lines 3-7 or 1st paragraph); that each one of the light-emitting diodes (10,20-figs.1 & 3) and the low-pressure discharge lamp (6) directly transmit their light to the light-emitting panel (8-fig.1,18-fig.3); that the illumination system comprises control electronics (page 3, lines 17-19 or 3rd paragraph) that inherently changes the luminous flux of the light-emitting diodes; wherein the at least one light emitting diode has a light emission wavelength (at least blue and green, page 4, line 7) relative to the light emission wavelength of the electric discharge lamp inherently setting the color temperature of the light emitted by the light source to a level above that of the discharge lamp alone.

9. As for the phrases "so as to set the color temperature of the light emitted by the light source independently of a display device illuminated by the light source" in claim 8, "for selectively setting the luminous flux of the at least one light emitting diode dependent upon the color temperature of the ambient light, or under control by a user of the illumination system" in claim 12, and "for selectively adjusting, during normal operation of the illumination system, luminous flux of the at least one light emitting diode dependent upon the illumination level of an image displayed by the display device" (claim 14), these recitations are considered to be an intended use or function of each of the at least one light emitting diode and control electronics, respectively, which does not pose any structural limitations not already met by German patent '134.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3, 4, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent (DC 20007134).

12. German Patent '134 discloses applicant's claimed illumination system including alternating light-emitting diodes (10) producing at least blue light emission wavelength (page 2, lines 25-27 or 6th paragraph). However, German Patent '134 does not disclose: that the color temperature of light emitted by the light source can be set so as to range from 6,000 K to 11,000 K; that the light-emitting diodes produce a predominantly blue light emission wavelength; a liquid crystal display device optically coupled to the claimed illumination system.

13. German Patent '134 does teach a lighting unit in the same field of endeavor (page 1, bottom paragraphs to top of page 2, line 1-3) with adjustable chromaticity for changing the color temperature of an LCD display within a broad range of color temperatures between 5000-10000 K. German Patent '134 further teaches (in page 2) that the color temperature of the lighting unit is desirably made to be adjusted in an infinitely variable fashion by having secondary light sources (LED) of a predominantly blue and green LEDs defining a different color and color temperature from the primary light source (discharge electric lamp) for the purpose of varying the chromaticity of the

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output light within at least the color temperature range of 5000-10000 K for the lighted LCD without changing the parameters of the light source(s) and the LCD.

14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the lighting unit with adjustable chromaticity of German Patent '134 to include an LCD display coupled to the light unit in order to apply the principle of changing chromaticity of the LCD display by changing that of or the color temperatures of the lighting unit used to illuminate the LCD as taught by German Patent '134 in order to variably change the chromaticity and color temperature of the LCD display without changing the parameters of the light source and LCD.

15. Claims 3, 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over REITHMEIER (US 6,488,385) in view of TURNBULL et al (US 5,803,579).

16. REITHMEIER discloses applicant's claimed invention except the color temperature of the light emitted by the light source that can be set to range from 6,000 K to 11,000 K and the light emitting diodes comprising a blue light emission wavelength.

17. TURNBULL teaches light sources emitting light set in the range of 2,000 K to 10,000 K by fluorescent type light sources (col.15, lines 54,57) and light emitting diode type light sources (col.22, lines 25-28) for the purpose of producing hue variations of white light applicable to at least backlight displays (col.9, line 63 to col.10, line 12) to enhance apparent color and contrast (col.7, lines 19-24) of the object/display being illuminated. TURNBULL further teaches blue-green LEDs (col.22, lines 4-15) for the purpose of mixing light with another wavelength to produce at least white light.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the backlighting device of REITHMEIER with a set color temperature of the light source in the approximate range of at least 6,000 to 10,000 K and a blue light emission from the LEDs as taught by TURNBULL in order to produce variations of white light in enhancing visibility of the color and contrast of images.

Response to Arguments

18. Applicant's arguments filed 16 October 2003 have been fully considered but they are not persuasive.

19. Applicant argues that in contrast to the purpose of the light-emitting diodes in Reithmeier of adding additional light so as to compensate for dark ridges that occur at the joints of the two or more abutting fluorescent lamps, applicants' light source includes a discharge lamp which, during normal operation of the illumination system has a fixed electromagnetic spectrum. Applicant further argues that the light-emitting diodes of the present invention (claims 1, 8, etc.) are for the purpose of selectively adjusting or setting the color temperature of the light emitted by the overall light source comprising the discharge lamp and the plurality of light-emitting diodes which applicant states is not taught by Reithmeier patent and concludes that Reithmeier can not and does not anticipate the invention as claimed. In response, anticipation of rejected claim(s) is based on claimed structure met by the prior art. The claimed structure, which in at least applicant's claim 1 includes a light-emitting panel and a light source including a low-pressure mercury-vapor discharge lamp having a fixed electromagnetic spectrum and a

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plurality of light-emitting diodes. Such structure is adequately met by Reithmeier. It is maintained that applicant's intended use or purpose of at least selectively adjusting or setting the color temperature must result in a difference in structure between the prior art and the claimed structure for the claim to overcome at least the rejection of being anticipated by the prior art to Reithmeier.

20. Applicant contends that the legal support for the recitations of intended use of the claimed invention to in re Casey has been misinterpreted because the case involved a taping machine in contrast to applicant's illumination system. It is maintained that reference to in re Casey is adequately used to make the point that any functional features or intended use recitations do not further limit the claim if there is no difference between the claimed structure and the prior art that meets the structure.

21. Applicant argues that Reithmeier does not disclose the concept of selectively setting the color temperature of the light emitted by the light source, that instead it teaches away from the invention by providing homogeneous overall impression. It is maintained that a teaching or suggestion is only relevant when establishing prima facie obviousness of the claimed invention. The prior art used to reject any claim as being anticipated by the prior art only has to meet the claimed structure. Any further concept or function or further definition of the claimed invention must result in claiming structure different from the prior art. Therefore, any of the statements that intends to produce a certain result or use (e.g. claim 2 "for selectively increasing the color temperature ..."; claim 8 "to set the color temperature of the light independently of a display device ...",

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etc.) does not have to be explicitly taught by the prior art that anticipates the claimed structure.

22. Furthermore, if applicant has claimed structure which conveys the teaching of selectively setting the color temperature but the claim(s) are still met by the prior art to Reithmeier in structure and/or by a further teaching of obviousness that does not reflect the claimed selective setting of the color temperature, then the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

23. Applicant states that claim 1 is amended to reflect a fixed "high brightness light source", i.e. a low pressure mercury vapor discharge lamp that is substantially invariant during operation and directed to a passage (page 2, lines 8-9) in the specification of the application. Claim 8 is stated to also recite a discharge lamp with a fixed electromagnetic spectrum. Applicant contends that claim 1 is novel over Harter because the electromagnetic spectrum of the high brightness light source is not fixed in Harter. In response, it is reviewed that Harter does not disclose a fixed electromagnetic spectrum in normal operation of the low-pressure mercury vapor discharge lamp or electric discharge lamp as now claimed in claims 1 and 8. Therefore, rejection of claims as being anticipated by Harter is withdrawn. Arguments regarding claims 12 and 14 are now moot in view of the withdrawal of the rejection regarding the prior art to Harter.

24. In regards to applicant's further note that applicants priority date under 35 USC 119 antedates the Harter date, no prior art is antedated by a foreign priority document without being perfected under 35 USC 119 with an English translation of the foreign document. However, applicant will not need to provide an English translation of the foreign priority document given the withdrawal of the rejection of claims regarding Harter.

Allowable Subject Matter

25. Claims 13, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SIITARI (US 6,213,615) shows at least first and second lamps (1-5) having different color temperatures (6000 K, 9000 K) in the field of illuminating an LCD display and control electronics (fig.2A) that are electrically connected to the first and second lamps (Lamp1, Lamp2) by voltage adjustment devices (10,11) and a light detector, the control electronics having such structure connected to the first and second lamps set the light output (luminous flux) of each of the lamps dependent upon the illumination level sensed by the light detector (12).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cariaso whose telephone number is (571) 272-2366. The examiner can normally be reached on 9-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Alan Cariaso
Primary Examiner
Art Unit 2875

AC
December 31, 2003